



AeroSilento – a new high quality supply of oil-free air or vacuum in laboratory



To supply vacuum or compressed air, e.g. for the aeration of fermenters and bioreactors in biotechnological laboratories not equipped by central air and vacuum lines, LAMBDA has developed an innovative, microprocessor controlled, pressure-regulated compact and virtually noiseless air compressor and vacuum pump – the LAMBDA AeroSilento.

There are hundreds of air compressors and vacuum pumps available on the market. However, when an oil-free, compact, low pulsation and very quiet pump is required, the choice becomes limited.

The LAMBDA AeroSilento uses the scroll principle based on an almost unknown mechanism using two spirals. One spiral is stationary while the other rotates around the first one. This movement generates a series of closed compartments with gradually decreasing volume and increasing pressure. The transport of gas is smooth and progressive. Additionally, the multiple mechanical closures through the contact of both spirals results in a very good pressure stability. This means that the final pressure does not decrease with the flow rate, as it is usual in other compressor types. The scroll principle was invented about one hundred years ago. However, it could not be produced without the use of modern, numerically controlled machines.

The scroll-pump system has been selected because of its inherent high-quality features:



- **maintenance-free** operation
- **oil-free** operation
- **low pulsation**
- **extremely low noise** level (comparable to a PC)
- **long lifetime**
- **excellent** flow and pressure **stability**
- can be used as a **compressor** as well as a **vacuum pump**
- **very small** dimensions (front dimensions of about half a page)

Technical properties

| | |
|-----------------------------|---|
| Max. air flow rate: | 5 l/min |
| Max. pressure: | 0.2 MPa |
| Output pressure regulation: | fully automatic pressure regulation from 0 to 200 kPa (2 atm or 2 bars) |
| Vacuum: | 4 kPa (0.04 atm or about 40 mbar) |
| Power supply: | 100 to 240 VAC/50-60 Hz, 150 W |
| Noise level: | 29 dB |
| Dimensions: | 15 x 16 x 30 cm (W x H x D) |
| Weight: | 4.5 kg |
| Safety: | conform CE |
| Warranty: | 2 years |